UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,920	06/02/2001	Ravi Chandra	4906.P078	4641

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EXAMINER
BAUGH, APRIL L

ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/872,920	CHANDRA ET AL.
		Examiner	Art Unit
		April L Baugh	2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement. .

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *20020829 &20030519*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 20041115

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United
States before the invention thereof by the applicant for patent, or on an international application by another who
has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention
thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

2.   Claims 12-25 rejected under 35 U.S.C. 102(e) as being unpatentable by US Patent No.

6,694,450 to Kidder et al.

Regarding claim 12, Kidder et al. teaches a network element comprising: a cross connect

control module to host a first and second network process, the first network process to generate a

first set of data after restarting and the second network process to synchronize the first set of data

with a second set of data generated by the first network process before restarting upon

determining a time period has not expired, the time period beginning when the first network

process dies; and a traffic card coupled to the cross connect module, the traffic card to process a

set of traffic with the synchronized first and second set of data (column 3, lines 42-52 and

column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Regarding claim 16, Kidder et al. teaches a network element comprising: a first processor

to execute a first and second network process, the first network process to generate a first set of

data before restarting and a second set of data after restarting, the second network process to

synchronize the first and second set of data upon determining a time period has not expired, the

time period beginning when the first network process dies; and a second processor coupled to the

first processor, the second processor to process a set of traffic using the first set of data before

the first network process restarts and the third set of data after the first network process restarts

(column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column

43, line 12).

Regarding claim 20, Kidder et al. teaches a network element comprising: a first memory

to host a first network process, the first network process to generate a first set of data before

restarting and a second set of data after restarting; a second memory coupled to the first memory,

the second memory to host a second network process, the second network process using the first

and second set of data if a time period has not expired, the time period beginning when the first

network process dies; and a third memory coupled to the first and second memory, the third

memory to store the first set of data before the first network processes restarts and to store a

synchronized set of the first and second set of data after the first network process restarts

(column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column

43, line 12).

Regarding claim 24, Kidder et al. teaches a system comprising: a first network element to execute a first network process the first network process to generate a first set of data before restarting and a second set of data after restarting; and a second network element coupled to the first network element, the second network element to execute a second network process, to determine the first network process died, to start a counter upon determining the first network process has died, to store the first and second set of data, and to synchronize the first and second set of data upon determining the counter has not exceeded a time period (column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Regarding claim 13, Kidder et al. teaches the network element of claim 12 wherein the cross connect module comprises a first and second memory to host the first and second network process (column 3, lines 42-52 and column 3, line 63 – column 4, line 6).

Regarding claim 14, Kidder et al. teaches the network element of claim 12 wherein the traffic card comprises a set of processors to process the first and second set of data (column 3, lines 42-52 and column 3, line 63 – column 4, line 6).

Regarding claim 15, Kidder et al. teaches the network element of claim 12 wherein the cross connect module comprises: a first memory to host the first network process; a second memory coupled to the first memory, the second memory to host the second network process; and a third memory coupled to the first and second memory, the third memory to store the first set of data, second set of data, and the synchronized set of data (column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Regarding claim 17, Kidder et al. teaches the network element of claim 16 wherein the

first processor comprises a memory to store the first, second and third set of data (column 3,

lines 42-52 and column 3, line 63 – column 4, line 6).

Regarding claim 18, Kidder et al. teaches the network element of claim 16 further

comprising the first processor to allocate a first memory to the first network process and a second

memory to the second network process (column 3, lines 42-52 and column 3, line 63 – column 4,

line 6).

Regarding claim 19, Kidder et al. teaches the network element of claim 16 further

comprising the first processor to allocate a first memory to the first network process, a second

memory to the second network process, and a third memory to store the first set of data, the

second set of data, and the third set of data (column 3, lines 42-52 and column 3, line 63 –

column 4, line 6 and column 42, line 66 – column 43, line 12).

Regarding claim 21, Kidder et al. teaches the network element of claim 20 wherein the

first memory, the second memory and the third memory are main memory (column 3, lines 42-

52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Regarding claim 22, Kidder et al. teaches the network element of claim 20 wherein the

first memory, the second memory, and the third memory are mass storage (column 3, lines 42-52

and column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Regarding claim 23, Kidder et al. teaches the network element of claim 20 wherein the

first memory, the second memory, and the third memory are a set of regions of a memory

(column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column

43, line 12).

Regarding claim 25, Kidder et al. teaches the system of claim 24 wherein the second

network element comprises: a first memory to store the first set of data and the synchronized set

of data; and a second memory to store the second set of data (column 3, lines 42-52 and column

3, line 63 – column 4, line 6).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1-11 and 26-38 rejected under 35 U.S.C. 103(a) as being unpatentable over US

Patent No. 6,694,450 to Kidder et al. in view of Applicant Admitted Prior Art (AAPA).

Regarding claims 1 and 28, Kidder et al. teaches a computer implemented method and

machine-readable medium comprising: synchronizing the first set of data with a second set of

data if the time period does not expire, the second set of data received from the network process

after the network process restarts (column 3, lines 42-52 and column 3, line 63 – column 4, line 6

and column 42, line 66 – column 43, line 12).

Kidder et al. does not teach receiving a first set of data from a network process;

determining death of the network process; clearing the first set of data if a time period expires.

AAPA teaches receiving a first set of data from a network process; determining death of the

network process; clearing the first set of data if a time period expires (page 2, section 0002 and

page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by receiving a first set of data from a network process; determining death of the network process; clearing the first set of data if a time period expires because this data is invalid and this prevents the system from processing invalid data.

Regarding claim 7 and 34, Kidder et al. teaches a computer implemented method and machine-readable medium comprising: detecting death of a process; restarting the network process; restoring a set of configurations to the network process; if a first set of data is generated before a time period expires, then synchronizing the first set of data with a second set of data, the second set of data having been generated before the death of the network process (column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Kidder et al. does not teach if the time period expires, then clearing the second set of data. AAPA teaches if the time period expires, then clearing the second set of data (page 2, section 0002 and page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by if the time period expires, then clearing the second set of data because this data is invalid and this prevents the system from processing invalid data because this data is invalid and this prevents the system from processing invalid data.

Regarding claim 2, Kidder et al. teaches the computer implemented method of claim 1 (column 3, lines 42-52).

Kidder et al. teaches further comprising indicating the first set of data as stale when the network process is determined to be dead. AAPA teaches further comprising indicating the first set of data as stale when the network process is determined to be dead (page 2, section 0002 and page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by further comprising indicating the first set of data as stale when the network process is determined to be dead because this data is invalid and this prevents the system from processing invalid data.

Regarding claims 3, 9, 30,and 36, Kidder et al. teaches the computer implemented method of claim 1, 7, 28, and 34 (column 3, lines 42-52).

Kidder et al. teaches wherein expiration of the time period is determined with a timer maintained after the network process is determined to be dead. AAPA teaches wherein expiration of the time period is determined with a timer maintained after the network process is determined to be dead (page 2, section 0002 and page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by wherein expiration of the time period is determined with a timer maintained after the network process is determined to be dead because this data is invalid and this prevents the system from processing invalid data.

Regarding claims 6, 11, 33, and 38, Kidder et al. teaches the computer implemented method of claim 1, 7, 28, and 34 (column 3, lines 42-52).

Kidder et al. does not teach wherein further comprising clearing the second set of data if the time period expires and a done signal is not received. AAPA teaches wherein further

comprising clearing the second set of data if the time period expires and a done signal is not received (page 2, section 0002 and page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by wherein further comprising clearing the second set of data if the time period expires and a done signal is not received because this data is invalid and this prevents the system from processing invalid data.

Regarding claims 8 and 35, Kidder et al. teaches the computer implemented method of claim 7 and 34 (column 3, lines 42-52).

Kidder et al. does not teach indicating the second set of data as stale when the network process is detected as dead. AAPA teaches indicating the second set of data as stale when the network process is detected as dead (page 2, section 0002 and page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by indicating the second set of data as stale when the network process is detected as dead because this data is invalid and this prevents the system from processing invalid data.

Regarding claim 26, Kidder et al. teaches the system of claim 24 (column 3, lines 42-52).

Kidder et al. does not teach further comprising the second network element to clear the first and second set of data if a time period expires. AAPA teaches further comprising the second network element to clear the first and second set of data if a time period expires (page 2, section 0002 and page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by further comprising the second network element to clear the first

and second set of data if a time period expires because this data is invalid and this prevents the system from processing invalid data.

Regarding claim 27, Kidder et al. teaches the system of claim 24 (column 3, lines 42-52). Kidder et al. does not teach further comprising the second network element to mark the first set of data as stale when the first network process dies. AAPA teaches further comprising the second network element to mark the first set of data as stale when the first network process dies (page 2, section 0002 and page 3, section 0006-0007). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the distributed process redundancy of Kidder et al. by further comprising the second network element to mark the first set of data as stale when the first network process dies because this data is invalid and this prevents the system from processing invalid data.

Regarding claims 4, 10, 31, and 37, Kidder et al. teaches the computer implemented method of claim 1, 7, 28, and 34 wherein the first set of data and the second set of data are synchronized after a done signal is received (column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Regarding claims 5 and 32, Kidder et al. teaches the computer implemented method of claim 1 and 28 further comprising restoring a set of configurations to the network process after the network process restarts (column 3, lines 42-52 and column 3, line 63 – column 4, line 6 and column 42, line 66 – column 43, line 12).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. The following patents are cited to further show the state of the art with respect to

process synchronization restart in general: Hanson, Sugano, Feray et al., and Heimbigner.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to April L Baugh whose telephone number is 571-272-3877. The

examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALB

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER